

VOCALIZE? Yes, with the Z-GRASS-32 Add Under. Latest word, just received two days before we went to press via The SOURCE, is that the Add-Under will have a "talking" voice interface! More details on this as they come in, but for the present, the specifications for the Add-Under have been decided upon by all concerned parties, and the unit is GO for a late '81 delivery. It will not have a built-in disc interface capability, but will be configured to accept this as a plug-in optional feature. RAM count is now 16K, while ROM is 32K. The 16K RAM will be expandable to 64K by simple substitution of chips plus a couple of board wiring changes. The disc interface will expand the RAM to 64K, so that the full up system could have 128K of memory!

- **STATUS of other efforts:** The following cartridges are in manufacture: GALACTIC INVASION, BIORYTHMS, and PIRATES CHASE. In work and almost ready to go are: SPACE FORTRESS, CHECKERS, and MUSIC. This last cartridge will have a 6K program to self-store your musical compositions while you are working on them, plus a built-in tape cassette interface to allow you to directly transcribe to and from tape for long-term storage. The Arcade itself is in production, as is the new AstroVision Basic cartridge, and the manual for the cartridge is now being proof-read. Scheduled availability date of the Basic is late August.
- **PERSONNEL CHANGES** Michael Peck is now the President of AstroVision, replacing Dan Dawson in the third week of June. I spoke with Mr. Peck, and he is very interested in getting the AstroVision steam roller under way. John Perkins is working for AstroVision as a consultant, primarily interested in getting the Add-Under into production, while Brett Bilbray is also working for them, with responsibilities in the production Arcade area. George Moses is doing a lot of work for AstroVision in the production of the new Manual to accompany the AstroVision Basic cartridge.
- **BALLYCHECK** is the name given by Dick Belton to his version of the Balcheck program the factory uses to check the motherboards prior to installation in the cases. I received a sample of his effort - it is a compact box, about 2x2x4, with two LEDs for readout, and two cables to connect to the Arcade. One goes to the 50-pin connector, the other to the 5 volt supply at the light-pen connector. Once plugged in, it goes through the routine of checkout, and if a failure is found, the LEDs indicate the area of failure using a code system. It also includes the machine code input routine. Check Dick's ad on p. 100.
- **EDGE TAGS** are again being sold by Roger Saunders. These little stick-on labels are placed on the spine of your game Videocades so that you can read the subjects when the 'cades are stored in the Arcades' rack. Also included are labels for the hand controller plugs. See his ad on p.97. L & M Software report that they expect their prices to rise soon, so a word to the wise...
- **SPINNING WHEEL** is a combination program that Tom Owczarek uses at Faires as a fund raiser. The first part takes the place of the old 'round and around she goes' wheel of fortune with an RND(30) plus exploding box display while the computer is deciding which of the 30 numbers is the chosen one. Then there are three designs and dummy advertising messages which you would want to change for your own usage. Use GO to restart the game, and always wait for "Place Your Bets" before making any entries.

ARCADIAN

```

1 .
2 .SPINNING WHEEL
3 .
10 BC=200;FC=215
15 GOSUB 250
17 &(10)=176
20 NT=1
30 CLEAR
40 Z=0
50 CX=-20;CY=25;PRINT "SPINNING"
55 BOX 29,0,20,10,3
60 FOR A=RND (30)
70 CX=-10;CY=0
80 PRINT A
90 B=RND (30)*2;BOX -50,-20,B,B,3
100 Z=Z+1
110 IF Z<50GOTO 60
120 CLEAR
130 CX=-10;CY=35
140 PRINT "STOP"
145 FOR Z=1TO 250;NEXT Z
150 CY=20;PRINT "    WINNING NUMBER IS"
152 FOR Z=1TO 250;NEXT Z
155 CX=-15;CY=0
156 PRINT "a ",#1,A," _"
160 FOR M=1TO 2000;NEXT M
170 CY=-25;PRINT "    PLACE YOUR BETS!"
180 PRINT "    MAX. 4 NO. PER PERSON"
190 M=KP
191 IF M=13GOTO 15
192 IF M=49GOTO 350
193 IF M=50GOTO 500
194 IF M=51GOTO 600
195 GOTO 190
250 CLEAR ;Z=0
255 NT=0
260 &(10)=142
270 Z=Z+1
280 IF Z=27GOTO 300
290 CY=-23;PRINT "    GOOD LUCK !                ",;GOTO 270
300 FOR Z=1TO 1500;NEXT Z;CLEAR ;RETURN
350 BC=111;&(9)=255;CLEAR ;LINE -80,10,0
351 FC=0;&(10)=176;NT=3
360 FOR A=-80TO 80;LINE A,RND (ABS(A)+1)-10,1
370 NEXT A;LINE 0,-10,0;A=10
380 FOR C=1TO 20STEP 2;A=A+C;B=A*6;BOX A-3,-B,1+B*2,B*10,1
390 BOX A-3,B*3,B*5,1+B*2,1;NEXT C;FOR A=-30TO 30
400 LINE A,-44,1;LINE 0,-10,0;NEXT A;FOR A=-44TO -11STEP 8
410 BOX 0,A,ABS(A)*10,ABS(A)*6,2
411 NT=10;CY=-15;PRINT "    P.A.S.S."
412 CY=-25;PRINT "    BOOTH"
413 NEXT A;FOR Z=1TO 5000;NEXT Z
419 NT=1
420 &(9)=50;BC=200;FC=215;GOTO 170
500 CLEAR ;&(21)=0;&(10)=176;NT=3;BOX 0,-40,158,6,1
505 BC=240;FC=7
510 FOR A=1TO 50;BOX RND (160)-80,RND (88)-44,1,1,1;NEXT A
520 BOX 0,-20,30,10,1;BOX 0,0,20,30,1

```

Tom Owczarek
2120 Garrick
Warren, MI 48091

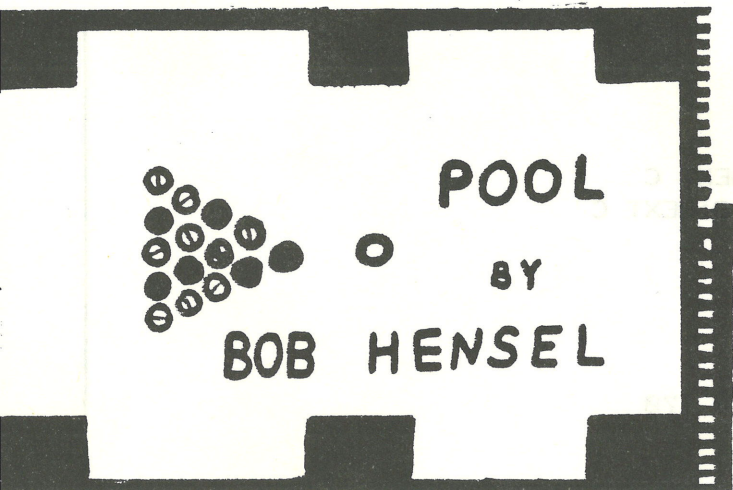

```

2 . DIAMONDS
3 . BY ROBERT ROSENHOUSE
4 . SUPER SOFTWARE
5 .
10 CLEAR ;B=24;C=25;D=30
20 FOR T=1TO DSTEP 2;X=RND (68);Y=RND (27);@(T)=X;@(T+1)=Y
30 FOR A=1TO BSTEP 2;BOX X,Y,A,C-A,3;NEXT A
40 FOR A=1TO BSTEP 2;BOX -X,Y,A,C-A,3;NEXT A
50 FOR A=1TO BSTEP 2;BOX -X,-Y,A,C-A,3;NEXT A
60 FOR A=1TO BSTEP 2;BOX X,-Y,A,C-A,3;NEXT A
70 IF RND (7)=1BC=RND (256);FC=BC+4+86RND (32)
80 NEXT T
90 FOR T=1TO DSTEP 2;FOR A=1TO BSTEP 2
100 BOX @(T),@(T+1),A,C-A,3;BOX -@(T),@(T+1),A,C-A,3;BOX -@(T),-@(T+1),A,C-A,3;
BOX @(T),-@(T+1),A,C-A,3
110 NEXT A;NEXT T;RUN

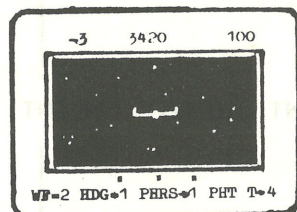
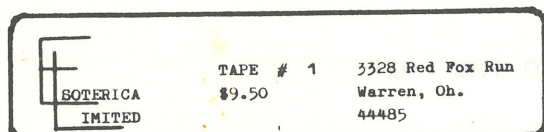
```


- HI RES Modification as created by Perkins Engineering - latest word is that the system is available to experimenter-types who can do their own programming. Due to other commitments at the present, Perkins is not available to develop software. So if you want to work on it yourself, and be a real originator, you can buy the kit at \$250, or the built up/tested unit at \$350 (using your board).

- KLUDGE Board written up on page 72 has an error in the transistor callout, it should be 2N4401. Barry Ellerson now has some p.c. boards for sale and a clock kit - see his ad on p. 100.

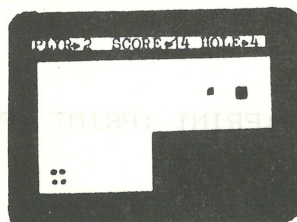


Pool is a computer version of the Billiards game 8-Ball. The computer will rack the balls and break. The direction of the Cue ball is controlled by JX(1) & JY(1). The length of the shot is controlled by the Cue stick at the right of the screen. After selecting the desired angle & length, pull the trigger TR(1) to make the shot. The direction of any other balls hit by the Cue ball is controlled by KN(1). If KN(1) is at its center the other balls will continue in the same direction as the Cue ball. Turning KN(1) all the way clockwise or counter-clockwise will deflect the balls 45 degrees from the path of the Cue ball. **LISTING** →



STAR TREK

You are at the helm of the 400,000 metric ton star ship looking through the front view-screen into deep space. It is a weary ship. You have already done battle with a class 1 cruiser and destroyed a Klingon outpost. Suddenly, a siren sounds "Red Alert!" "Klingon Battle Cruiser" flashes across the sensor readout as the vessel appears on screen, very small at first, but getting larger. He's attacking at warp factor 6! Before you react the enemy fires! An alarm sounds! Engineering reports the hit damaged the photon torpedos & the forward shield is still weakened from the last battle. Another enemy blast fills the screen as it's about to hit. You must act quickly! You are not yet in phaser range. What will you do? **STAR TREK**, the aggressive, game from Esoterica Ltd.



MINI GOLF

A game of computer putt-putt for one to four players. Use the joystick to line up your shot. Hit the ball hard or soft or with the perfect "Golfer's Touch." Bank it off the side boards for those "tricky" shots but don't hit it too hard or you'll end up in the rough. Computer keeps running score for one to four players, including penalty strokes. It also prints player up and hole no.

Both programs make full use of color graphic and sound effects, and perform more functions that can be listed here. Send check or money order to:

Esoterica Ltd.
3328 Red Fox Run
Warren, Ohio 44485



BOX 94801
SCHAUMBURG, IL 60193

Pack Rat

TAPE 9

\$10.95 POST-PAID

INSPIRED BY THE EXCITING MIDWAY ARCADE GAME PAC-MAN, MIKE PEACE HAS CREATED THIS VERSION OF THAT GAME FOR THE HOME COMPUTER. THIS GAME HAS THE EXCITEMENT OF PAC-MAN WITH A FEW CHANGES. YOU MUST EAT UP ALL THE DOTS WHILE AVOIDING THE CAT WHO IS IN HOT PURSUIT OR WAITING TO JUMP ON YOU. FROM TIME TO TIME YOU MUST STOP EATING THE DOTS AND RUN TO GET THE CHEESE (BONUS) FOR A MAXIMUM SCORE. THE HIGH SCORE IS KEPT AS A CONSTANT CHALLENGE TO TRY TO BEAT. GREAT FUN. HAS BEEN SAID TO BE BETTER THAN A LOT OF BALLY'S OWN CARTRIDGES. USES HAND CONTROL. EXCELLENT SOUND EFFECTS. IS IN BOTH NEW AND OLD BASIC. LOADS QUICKLY. \$10.95 POST-PAID.

ARCADIAN

```

10 .POOL
20 .BY BOB HENSEL
30 :RETURN ;&(9)=39;&(0)=170;&(1)=170;&(2)=30;&(3)=30;CLEAR ;BC=170;FC=7
40 S=1;T=0;NT=0;BOX -3,-2,155,83,1;BOX -3,-2,152,79,2
50 X=75;FOR Y=-42TO 38STEP 2;BOX X,Y,1,1,1;NEXT Y;X=76;FOR Y=-42TO 38STEP 10;B
OX X,Y,1,1,1;NEXT Y
60 X=76;FOR Y=-42TO 38STEP 10;BOX X,Y,1,1,1;BOX -70,32,20,12,1;BOX -70,-35,20,
12,1;BOX 0,-35,23,12,1
70 BOX 64,-35,18,12,1;BOX 64,32,18,12,1;BOX 0,32,23,12,1
80 CY=10;CX=19;PRINT "POOL";CY=-10;CX=-8;PRINT "BY BOB HENSEL";NT=5
90 X=-30;Y=4;B=-8;D=1;FOR A=1TO 5;FOR C=1TO D;Y=Y-6;B=B+9;IF B>10B=1
100 GOSUB 400;NEXT C;D=D+1;Y=ABS(Y)+6;X=X-6;NEXT A
110 BOX -42,-2,1,3,3;BOX -42,-2,3,1,3
120 B=0;Y=-2;FOR X=36TO -24STEP -6;GOSUB 400;GOSUB 400;NEXT X
140 FOR A=1TO 8;FC=90;FOR C=1TO 50;NEXT C;MU=60;FC=7;NEXT A;BOX 0,-2,144,42,2
150 @(0)=RND (19)+5;@(16)=RND (4)+5;@(33)=-71;@(34)=37;GOSUB 460;GOSUB 400;FOR
B=1TO 15
160 @(B)=RND (19)+3;@(B+16)=RND (12)+1;GOSUB 460
170 GOSUB 400;IF PX(X+2,Y+2)=0GOSUB 470
180 NEXT B;GOTO 210
190 @(0)=13;@(16)=7;GOSUB 400;GOSUB 460;GOSUB 400
200 @(33)=@(33)-6
210 S=S+1;C=-40;Q=2;BOX 79,0,2,88,2
220 BOX 79,C+Q,2,2,1;IF TR(1)=1GOTO 270
230 Q=Q+2;IF Q<80GOTO 220
240 BOX 79,C+Q,2,2,2;IF TR(1)=1GOTO 270
250 Q=Q-2;IF Q<0GOTO 230
260 GOTO 240
270 B=0;Q=Q-2;MU=60;IF JX(1)=0IF JY(1)=0GOTO 300
275 GOTO 290
280 W=KN(1);IF ABS(W)<65GOTO 300
282 W=W-65;IF V=0V=W;GOTO 300
284 IF H=0H=W;GOTO 300
286 H=0;GOTO 300
290 H=JX(1);V=JY(1)
300 GOSUB 460;J=X+H*6;K=Y+V*6;IF (J<-75)+(J>70)H=-H;MU=60;GOTO 300
304 IF (K<-40)+(K>35)V=-V;MU=60;GOTO 300
306 IF PX(J,K+2)=0GOTO 330
310 C=B;FOR A=0TO 15;IF (@(A)=@(B)+H)*(@(A+16)=@(B+16)+V)B=A
320 NEXT A;IF B#C MU=60;GOTO 280
330 BOX X,Y,5,5,2
340 X=J;@(B)=@(B)+H;Y=K;@(B+16)=@(B+16)+V;GOSUB 400
350 IF PX(X+2,Y+2)=0GOSUB 470;Q=0;IF B=0GOTO 190
360 Q=Q-1;IF Q>0GOTO 300
390 GOTO 210
400 MU=50;IF B=0BOX X,Y,3,3,3
410 IF B>7BOX X,Y,1,3,3
420 IF B=8BOX X,Y,3,1,3
430 BOX X,Y,5,5,3;RETURN
440 @(33)=@(33)+6;IF B>8@(33)=@(33)-6;@(34)=@(34)+6
450 RETURN
460 X= @(B)*6-75;Y= @(B+16)*6-44;RETURN
470 GOSUB 400;Y=41;X= @(33);@(B)=0;IF B>8X= @(34)
480 MU=70;MU=71;MU=72;MU=73;MU=74;MU=50;MU=48;GOSUB 400;GOSUB 440;IF B#0T=T+1
510 IF T=15GOTO 540
520 IF B=8GOTO 540
530 @(B)=30;RETURN
540 BOX 0,0,146,50,2;CX=-23;CY=8;PRINT "GAME OVER
550 PRINT ;CX=-41;IF T#15PRINT "8 BALL LOSER
560 IF TR(1)=1GOTO 30
570 GOTO 560

```




```

1 .
2 .
3 .
4 .OLD BENT NOSE
5 .BY BOB WISEMAN
10 Q=1100;GOTO Q
100 A=12;GOSUB H;GOSUB I
110 GOSUB K;IF UGOTO 190
115 B=A+W-5bV;IF A=BGOTO N
120 IF (B<0)+(B>24)GOTO N
130 GOSUB I;A=B;GOSUB H;GOSUB I;FOR X=1TO 9;MU=25;NEXT X
170 GOSUB K;IF VbV+WbWGOTO 170
180 GOTO N
190 IF @(A)<0GOTO N
195 GOSUB I;RETURN
200 GOSUB 600;GOSUB 100;L=A;IF @(L)=0GOSUB 1000;GOTO D
220 GOSUB 500;GOSUB 100;IF A=LGOSUB 220
230 IF @(A)=0GOSUB 1000;A=L;GOSUB H;GOSUB J;GOTO D
235 GOSUB H;GOSUB 500;FOR X=1TO Q;NEXT X
240 IF @(A)#@ (L)GOSUB 700;GOTO D
250 GOSUB 800;GOTO D
310 W=Ac5;C=28-15bW;R=RMb15-26;RETURN
320 BOX R,C,15,15,3;RETURN
330 U=TR(P);V=JY(P);W=JX(P);RETURN
400 BOX R,C,15,15,1;BOX R,C,13,13,2
410 IF T=1BOX R,C,11,5,1;BOX R,C,5,11,1
420 IF T=2BOX R,C,11,11,1;BOX R,C,7,7,2
430 IF T@ (A)=-T
440 RETURN
500 F=@ (A)c2;BOX R,C,11,11,1
505 S=C+3;G=RM;IF GBOX R-3,S,1,3,2;BOX R-3,S,3,1,2;BOX R+3,S,1,3,2;BOX R+3,S,3,
1,2
510 IF G=0BOX R-3,S,3,3,2;BOX R-3,S,1,1,1;BOX R+3,S,3,3,2;BOX R+3,S,1,1,1
515 F=Fc2;Y=RM;IF YBOX R,C,1,1,2
520 IF Y=0BOX R,C,3,1,2;BOX R,C+2,1,3,2
525 F=Fc3;BOX R,C-3,7,3,2
530 IF RM=0BOX R,C-2,5,3,1
535 IF RM=1BOX R,C-4,5,3,1
540 NT=30;MU=49+9bG;MU=49+9bY;MU=49+4bRM;NT=3;RETURN
600 P=3-P;CX=M;PRINT "PLAYER",#2,P,"'S TURN",;BC=232;IF P=2BC=56
605 RETURN
700 T=0;GOSUB J;A=L;GOSUB H;GOSUB J
710 CX=M;PRINT "IS NOT A MATCH",;RETURN
800 T=P;GOSUB J;GOSUB 850;A=L;GOSUB H;GOSUB J;GOSUB 850
805 CX=M;PRINT "MATCH!! MATCH!!",
810 FOR X=0TO 24;IF @(X)>0RETURN
820 NEXT X;CX=M;PRINT "IT'S A DRAW.",;GOTO 910
850 B=Ac5;C=RM;B=Bb5
860 FOR X=0TO 2
870 IF (@ (B)=@ (B+1))b (@ (B+1)=@ (B+2))GOTO 900
880 IF (@ (C)=@ (C+5))b (@ (C+5)=@ (C+10))GOTO 900
885 B=B+1;C=C+5;NEXT X;RETURN
900 CX=M;E=1;PRINT "YOU HAVE WON!!!",
910 FOR A=0TO 24;GOSUB H;IF @(A)=0GOSUB 1000
920 IF @(A)>0GOSUB 500
930 NEXT A;STOP
1000 BOX R,C,11,11,1;BOX R,C-3,9,1,2
1005 FOR X=0TO 3;BOX R-3+2bX,C-3,1,3,2;NEXT X

```


ARCADIAN

```

1010 BOX R+3,C+3,3,3,2;BOX R+3,C+3,1,1,1;BOX R-3,C,3,1,2;BOX R-2,C+1,3,1,2
1020 BOX R-1,C+2,1,1,2;BOX R,C+3,1,3,2;BOX R-3,C+3,3,1,2;BOX R-3,C+3,1,3,2
1025 IF ERETURN
1030 CX=M;PRINT "ACK! BENT NOSE!",
1050 FOR X=1TO 30;MU=87;NEXT X;T=0;GOSUB J;CX=M;PRINT "HE HIDES AGAIN ",
1080 R=RND (24);IF @ (R)<1GOTO 1080
1090 @ (A)=@ (R);@ (R)=0;RETURN
1100 T=0;P=2;M=-40;CY=40;CLEAR ;H=310;I=320;J=400;K=330;N=110
1110 FC=119;E=0;FOR A=0TO 24;GOSUB H;GOSUB J
1120 B=A+13;@ (A)=RM+1;NEXT A;@ (12)=0
1130 FOR A=0TO 24;B=RND (24);C=@ (A);@ (A)=@ (B);@ (B)=C;NEXT A
1140 D=200;GOTO D

```

 *** OLD BENT NOSE ***

THIS IS A TWO PLAYER GAME PLAYED ON A FIVE BY FIVE GRID. THE OBJECT OF THE GAME IS TO GET THREE OF YOUR MARKERS IN A STRAIGHT LINE HORIZONTALLY OR VERTICALLY. PLAYER ONE USES PLUS SIGN MARKERS; PLAYER TWO USES ZEROES. ON THE GRID, TWELVE PAIRS OF FACES ARE HIDDEN. WHEN IT IS YOUR TURN, USE THE JX AND JY ON THE GAME CONTROLLER TO MANUEVER THE REVERSED BOX TO THE SQUARE THAT YOU WANT TO GUESS. PULL THE TRIGGER. NOW GUESS ANOTHER, TRYING TO FIND THE MATCHING FACE. IF THE TWO FACES THAT YOU HAVE EXPOSED MATCH, THEN YOUR MARKER IS PUT ON THOSE SQUARES. FIRST PLAYER TO GET THREE OF HIS/HER MARKERS IN A LINE (NOT DIAGONALLY) WINS. BUT WATCH OUT!! OLD BENT NOSE IS HIDING OUT THERE TOO. IF YOU PICK HIS SQUARE, YOUR TURN ENDS AND OLD BENT NOSE TRADES PLACES WITH ANOTHER HIDDEN FACE. THIS GAME COMBINES GUESSING, MEMORY, AND STRATEGY.

MUSIC FOR GAMES

```

10 FOR A=256 TO 0STEP -4
20 &(23)=A;&(21)=A;&(19)=200
30 IF A=4A=256;IF TR(1)A=0
40 NEXT A:&(23)=0;&(21)=0

```

BY MIKE PEACE

EDGETAGS ★ ★

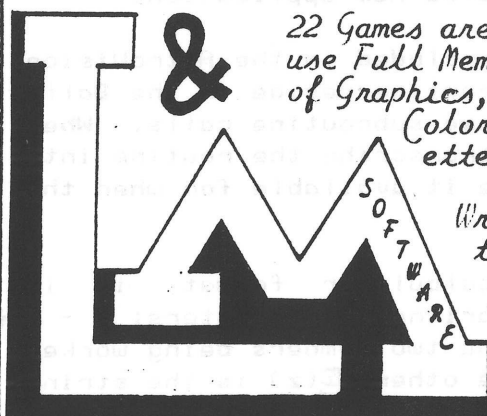
15 BALLY VIDEOCADE EDGETAGS
 WITH 4 HAND CONTROL TAGS
 (ALL SCRATCH & MAR RESISTANT)

\$3.50 SET

DEALER AND CUSTOM PRICES AVAILABLE
 CALL (503) 238-5796 AFTER 5:30
 EASY TO DO YOURSELF

CHECK TO:
 ROGER SAUNDERS
 304 N.E. 55th
 PORTLAND, OR. 97213

TAGS FOR NEW
 ASTROVISION VIDEOCADES
 TO BE AVAILABLE SOON!



22 Games are now available All
 use Full Memory & Display Lots
 of Graphics, Action, Sound and
 Color..Any Two on Cass-
 ette.....\$10.00

Write for free pic-
 tured Catalog.

L&M Software
 8599 Framewood, Dr
 Newburgh, IN.
 47630

SUPER SOFTWARE

Eighteen programs for the
Bally Computer System!!

We carry all game cartridges
at low discount prices!!

ZAP!

STOP
THE
MUTANKS!

BOOM!

ENTER TIME WARP!

Super Software

Super Software
now offers nine sets
of programs for use with
The Bally Computer System!

Super Software

Our programs are designed with
routines that utilize all of the
Bally's special features including sound,
color, and exciting graphics. We also carry
all of the game cartridges for the Bally at low
discount prices. Please write for our free catalog.

SUPER SOFTWARE

P.O. BOX 702

PLAINFIELD, NJ 07061



you want!



INWADERS
IN SECTOR 1



ONBOARD CALCULATOR,(\$), has not been utilized fully. The ARCADIAN tutorial on its basic operation was published in Vol 1, p.32. At that time, each digit of each number had to be individually entered, an arduous task. Then, in Vol 2, p.2, Gerry Holquist presented a loan payment program with greatly simplified input, but still having restrictions (such as interest had to be entered in 5 digit format). Now Jess Shadle has made up a number of programs where the input format can be almost anything and the program will accept and utilize it. One program is included this issue, Compound Interest. Some notes:

entering principal-you can use either \$1000 or 1000.00 or 1,000.00; if you do not use \$, then you must press I after the amount. Entering interest, any of the following will work: 5.2% .052 5.2 but no fractions. Term of loan must be in years. If you make an error, HALT the program and start again.

If you find this program of value to you in this application or any other, send Jess a buck to help keep his creative juices flowing. He currently is working on trig functions, quadratic equation solutions, sinking fund solutions, and similar programs - primarily for Blue Ram application.

The capability to do these functions is not included in the AstroVision Basic, being removed for other features. The routine reside in the Bally Basic between locations 2194H and 2226H, plus some subroutine calls. When the VIPER system becomes more in use, one could transcribe the routine into the VIPER, store the routine on tape, and have it available for when the occasion demands.

For those of you unfamiliar with the calculator format, it is \$n@(x),@(y),@(z) where n is one of the four arithmetic operators: + - x ÷ ; @(x) will be the string location of one of the two numbers being worked on while @(y) is the string location of the other. @(z) is the string location of the answer.



```
1 .
2 .
3 .COMPOUND INTEREST
4 .BY JESS SHADLE
10 CLEAR
20 FOR A=0 TO 165; @(A)=0; NEXT A
30 FOR XY=20078 TO 20128 STEP 2; %(XY)=0; NEXT XY
31 F=100; G=200
34 PRINT "COMPOUND INTEREST"
36 S=2
38 IF S=2P=6000; GOTO 75
60 .
70 CLEAR ; PRINT "RUNNING"; RETURN
75 @(98)=2; @(99)=1; @(134)=1; PRINT "LOAN AMOUNT"; PRINT ; GOSUB 3030
100 CX=-32; Z=1; FOR B=RT0 SSTEP -1; IF @(B)="0" IF ZGOTO 130
109 IF V=0 PRINT "$"; V=1
110 Z=0
120 TV=@(B)
121 IF (B=11)+(B=29)+(B=47)+(B=65)+(B=83)+(B=101)+(B=119)+(B=136)+(B=155) PRINT
",",
130 NEXT B
140 V=0; RETURN
200 PRINT ". "; FOR B=TT0 USTEP -1; TV=@(B); NEXT B; PRINT ; V=0; RETURN
500 IF E<2N=7
510 IF E=2N=25 6020 $-@(54), @(126), @(54)
520 IF E=3N=61 6030 IF @(62)+@(63)+@(64)<145 GOTO 6050
530 FOR I=1 TO B 6040 GOTO 6010
540 @(N+A)=@(165+J) 6050 PRINT "INTEREST+LOAN"; R=17; S=8; GOSUB F; T=7; U=6; GOSUB G
550 A=A-1; J=J+1 6051 PRINT
560 NEXT I
561 @(46)=1
570 IF E=2 IF (@(26))+(@(27))+(@(28))>0 $c@(18), @(36), @(18)
580 A=0; B=0; C=0; J=0; PRINT ; RETURN
3030 CX=-30; CY=CY-B
3040 K=KP
3041 IF K=31 GOTO 10
3042 IF K=36 TV=K; GOTO 3040
3043 IF K=37 TV=K; GOTO 3040
3044 IF S>0 IF K=13 GOTO 3040
3045 IF K=44 TV=K; GOTO 3040
3050 IF K=46 C=1; TV=46; GOTO 3040
3060 IF K=73 E=1; GOSUB 500; PRINT "INPUT INTEREST RATE, THEN"; PRINT "PRESS T"; P
RINT ; CX=-20; GOTO 3040
3070 IF K=84 E=2; GOSUB 500; PRINT "INPUT YEARS, THEN"; PRINT "PRESS P"; CX=-20; GOTO 3
040
3080 IF K=80 E=3; GOSUB 500; GOSUB 60; GOTO P
3090 IF K=67 STOP 6060 V=1; PRINT "NUMBER OF PAYMENTS"; R=107; S=98; GOSUB F; T=97;
3100 TV=K U=96; GOSUB G
3110 @(165+B)=K 6065 PRINT
3120 B=B+1 6070 PRINT "MONTHLY PAYMENTS"
3130 IF C=1 IF E=0 U=U+1; IF U=2K=73; GOTO 3060
3140 IF C=0 A=A+1 6080 $c@(0), @(90), @(90); GOSUB F; T=97; U=96; GOSUB G
3150 GOTO 3040 6090 PRINT "INTEREST PAID"
6000 $b@(54), @(90), @(90) 6100 $-@(0), @(36), @(90); R=107; S=98; GOSUB F; T=97; U=96;
6002 FOR Q=36 TO 53; @(Q)=0; NEXT Q GOSUB G
6005 $+@(0), @(36), @(36)
6010 $b@(0), @(18), @(144)
6015 $; @(0), @(144), @(0)
```

Jess Shadle
7 Cul de Sac
West Chicago, IL 60185

FOR SALE Computer Ear with documentation and software. \$55. Rory Wohl, 3513 Lynnfield, Shaker Heights, OH 44122

FOR SALE Basic, Interface, all issues of Arcadian Newsletters, Documents, 10 cassettes, programs, manuals, and more. A must for the serious programmer. First \$100 takes it. Robert Jaeger, 58 Millay Rd. Morganville, NJ 07751 201-536-3274

FOR SALE Baly Basic with literature and Basic, Interface, 8 working hand controls, Football, Baseball, Star Battle, Galactic Invasion (new) videocades. works great \$300. contact James Schaefer 5314 Blackistone Rd. Bethesda, MD 20016 301-229-8318

CLOCK MOD KIT \$9.00. Assembled and tested, \$11. ppd. Attention!! Experimenters, Servicemen!! Quality, double sided Kludge boards, \$4.25 ppd. Quantity discounts! Please inquire Barry Ellerson 5017 N. River Rd., Schiller Park, IL 60176 312-635-0859

BALLYCHECK for problem diagnostics and out-of-case repairs: For Sale complete tested unit for \$69. including shipping. Two to four week delivery. Kits may be possible. PROMs for BALLYCHECK now available, immediate delivery at \$19.50 with listing if requested. Includes shipping. Arcade Boards repaired and/or tested - one to two week turnover \$25 Min plus parts and shipping. Contact Dick Belton 301-488-2806 between 4-10 pm Eastern time.

CONTEST ENTRANTS this month were Bob Hensel, with POOL, and Bob Wiseman with Old Bent Nose. The winner of the \$100 check will be indicated by a big \$ on the program page. The winner will be determined by the judging panel who will let me know at the last moment, after this issue is complete. Anyway, at this time I can congratulate Bob, who will replace Dick Strauss on the panel.

-100-

ARCADIAN

Robert Fabris, vocalizer
3626 Morrie Dr.
San Jose, CA 95127

FIRST CLASS
U. S. POSTAGE
PAID
Sunnyvale, CA
Permit No. 931

63301BRG2917H
ARTHUR BERGANTZ
2917 HEADLAND DRIVE
ST CHARLES, MO

63301